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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

December 19, 1994

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Re: Initial Comments in ET Docket No. 94-32

Dear Mr. Caton:

Transmitted herewith is an original and nine (9) copies of the Comments of American Telecasting, Inc. on the Commission's Notice of Proposed Rulemaking in ET Docket No. 94-32, released November 8, 1994 (FCC 94-272), and entitled "Allocation of Spectrum Below 5 Ghz Transferred from Federal Government Use."

Please contact the undersigned if additional information on these Comments is desired.

Respectfully submitted,

  
Thomas J. Dougherty, Jr.  
Counsel for  
American Telecasting, Inc.

Attachments

cc: Mr. Steve Sharkey, OET (w/attach.)

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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Allocation of Spectrum Below	)	ET Docket No. 94-32
5 GHz Transferred from	)	
Federal Government	)	

Directed To: The Commission

**COMMENTS OF AMERICAN TELECASTING, INC.**

AMERICAN TELECASTING, INC. ("ATI"), by its counsel, hereby submits its comments on the Notice of Proposed Rulemaking (the "NPRM") in the above-captioned docket.

**I. ATI AND ITS BUSINESS**

ATI is in the business of providing wireless cable service to the American public. ATI's dedication to the business is demonstrated by the fact that ATI is the largest wireless cable operator in the United States, having in excess of 7.9 million households within its signal reach. ATI has raised over \$150,000,000 from public, private and institutional sources which is dedicated to the acquisition and the development of ATI's wireless cable operations.

As the largest member of this nascent industry, ATI has recognized the need to occupy a leadership role. In that role, ATI has formed an alliance of major manufacturers of microwave transmission and reception equipment to explore the art of digital modulation for the delivery of multichannel video programming at 2.5 GHz. This alliance includes Zenith Electronics, EMCEE Broadcast Products, California Amplifier and Andrew Corporation. This voluntary consortium

has explored its charter area actively and has advanced the art. It is hoped that, as a result of our joint efforts, digital and its enormous benefits will soon be available to the wireless cable industry.

## **II. ATI'S INTEREST IN THIS RULEMAKING**

Our interest in the development of digital technology probably is best understood by the fact that we know that we are newcomers to the ever more competitive and evolving world of information services provision. We cannot sit idle and wait for our video service competitors, such as cable companies and more recently telephone companies, to develop new and better technology and information services products which we would then employ. We need to stay a step ahead in this competitive area.

That means that we must be forward thinking, much like the Commission. Again, like the Commission, we foresee in the short term that the providers of information and telecommunications services will attempt to implement the so-called "Nationwide Superhighway." We foresee the development of that concept not as an aggregation of the bulk of communication traffic on just one wire; rather, we see that concept as the evolution of service providers into multi-service "one-stop-shopping" providers. That concept will realize vast scale economies that now lie dormant. Thus, ATI expects the consumer to appreciate the benefits of being able to make one telephone call to receive the consumer's cable TV and other information services.

One of our major planning goals is too ensure, as best as possible, that ATI is a pioneer in the development of the Nationwide Superhighway. At this point, however, we suffer a major technological handicap of our efforts to reach that goal. While we have channels giving us out-

bound capacity, we do not have sufficient capacity to offer a truly competitive, interactive package of information services.

It is essential that we obtain access to ample spectrum available and useable to allow ATI and other wireless cable providers to establish return links with inexpensive equipment and without the need to license each return path separately. Our industry needs to be able to install service equipment at a new customer's home on the same day that the customer places the service order. Our competitors will have that capability and, as a result, we will not survive without it.

Those requirements cannot be met with existing point-to-point microwave spectrum.<sup>1</sup> That spectrum is licensed on a station-by-station basis, after the completion of frequency coordination, the filing of a license application, the public notice of that application, a required 30-day waiting period and final application processing. It is not hard to appreciate that the required administrative procedures to establishing a station in those services, however small the station, are too time-consuming and expensive to lend those services to our needs. Moreover, the spurious emission and frequency stability requirements to using that spectrum are much too stringent to allow for the production of the low cost equipment needed to address the mass market.<sup>2</sup>

Instead, we need access to blocks of spectrum licensed on an area-wide basis like cellular mobile radio is licensed. If ATI had a block of spectrum in an area, it would be able to establish stations with concern only for interference that might be caused outside of its licensed area. But, that interference concern could be all but alleviated by informal coordination of channel use by

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<sup>1</sup> That spectrum is licensed under Parts 21 and 94 of the Commission's rules.

<sup>2</sup> Part 21 and 94 point-to-point microwave stations also are not appropriate for installation at the home because of the need to control their use closely to guard against the creation of destructive interference.

geographically adjacent licensees similar to the coordination practiced by cellular carriers. As a result, user stations could be established instantaneously and when desired by the consumer, and not just when allowed by a long and complicated licensing process.

Such an area-based licensing approach also is consistent with more relaxed antenna and transmitter performance standards. Those more relaxed requirements are essential to a business that must sell return path products that the household can easily afford.

The NPRM makes proposals which fit ATI's needs, and the needs of the wireless cable industry, almost as though the NPRM was written with our needs in mind. The NPRM targets the newly available bands for "new or developing services"<sup>3</sup> which is just what the above discussion is all about. The NPRM prefers a "flexible use of these bands so that licensees would be able to offer a wide range of services employing varying technologies."<sup>4</sup> That, again, is what we need. Following that proposal, the NPRM proposes "technical flexibility" which would allow "users freedom to choose the channelization, signal strength, modulation techniques and antenna characteristics they employ in providing service...."<sup>5</sup> That proposal, again, fits our above-described needs. Filling out our technical requirements, the NPRM proposes "service area boundaries".<sup>6</sup>

Of the frequency bands subject to the NPRM, we believe that the 4660-4685 MHz band is better suited to our needs than the 2 GHz spectrum. The 2390-2400 MHz band has amateur users and the high density uses of the spectrum proposed by us are incompatible with amateur radio operations. The other alternative band subject to the NPRM, the 2402-2417 MHz band, is in the

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<sup>3</sup> NPRM, at 4.

<sup>4</sup> Id. at 5.

<sup>5</sup> Id.

<sup>6</sup> Id.

middle of an ISM band. But that band is incompatible with our proposed spectrum use because our use of the spectrum would of necessity involve the establishment of receivers at the home where they will be in close proximity to microwave ovens and other consumer devices that use ISM frequencies.

A separate, and extremely important, benefit to us of using the 4 GHz spectrum is that it is separated by frequency a sufficient amount from our “outbound” MDS/ITFS channels to allow it to be incorporated inexpensively in the same reception equipment that is used at the subscriber’s side to receive wireless cable 2.5 GHz signals.<sup>7</sup> Without that ability and its cost savings, it is doubtful that we will be able to compete for households in the interactive information markets.

Finally, we would like to be able to use the spectrum at fixed points, but with the ability to offer mobile services as well. That later use is very important because people are in a transition to a mobile communications world. The flexibility to use the spectrum for mobile services is granted internationally in ITU Region 2 and should be retained in the Commission’s licensing rules to the extent possible to allow the spectrum to be used to meet ever changing service needs of the population.

The means of granting licenses in the 4 GHz spectrum is an important issue with implications for service quality, competition and the ability of the Commission to allow marketplace forces, rather than economic regulation, to shape the affected communications industries.

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<sup>7</sup> The separation of frequency is required to prevent blanketing interference within the subscriber’s equipment.

We exhort the Commission to recognize the need of wireless cable providers for the backhaul spectrum they will need to compete with other information services providers and carriers, such as full-service local telephone companies and cable TV companies. Competition is the key to avoiding a return to the rate of return regulated world which is so unpopular with the Commission but a recent mandate for the regulation of cable TV companies. We, accordingly, suggest that the Commission develop eligibility standards which will narrow the field of those who might seek this spectrum to those who already offer service to paying subscribers in the particular market.

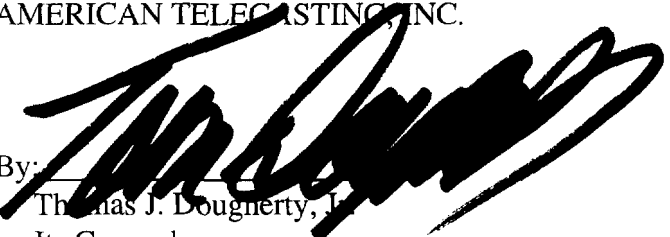
In channelizing the 25 MHz block of spectrum at 4 GHz, we suggest that the Commission divide it into five 5 MHz blocks, and limit a single entity or group of affiliated entities to no more than two such blocks in a single area. This limitation might have a sunset so that it does not operate to leave spectrum fallow in areas where the number of entities seeking the spectrum is less than three. This block assignment scheme would conduce to satisfying the needs of multiple potential competitors, thereby avoiding monopolies and their service problems.

Finally, we urge the Commission not to give telephone companies any preference over wireless cable companies in licensing the spectrum. Wireless cable companies are just as present in any particular market as telephone companies. Both have made investments in and commitments to the markets where they provide their respective services. If there should be any preference, it should be given to wireless cable companies. Telephone companies already have a two-way capability. As is well known, they are claiming to have the ability to offer video services along with telephone dial tone and, on that basis, have convinced the Commission to allow video dial tone service, have asked Congress to let them into the competitive provision of

video programming to the home, and have fought the cable/telco law and regulation in Federal Court on First Amendment grounds. Wireless cable needs to be able to compete with information services providers on an equal footing and that competition is impossible without the frequency allocation we seek for interactivity.

Respectfully submitted,

AMERICAN TELECASTING, INC.

By:   
Thomas J. Dougherty, Jr.  
Its Counsel

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